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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,343	10/21/2003	Jonathan B. Ballagh	X-1264 US	6650

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EXAMINER	
DINH, PAUL	

ART UNIT	PAPER NUMBER
2825	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/691,343	BALLAGH ET AL.	
	Examiner	Art Unit	
	Paul Dinh	2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) *13-26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 27-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is a response to the election filed on 1/19/07.

The examiner acknowledge:

- Applicant's election of group 1 (claims 1-12 and 27-31) with traverse.
- The withdrawal of non-elected claims 13-26.
- Applicant reserve to prosecute any future canceled claims in a subsequent divisional application, without prejudice.

Because applicant did not distinctly and specifically point out any grounds/reasons and/or the supposed errors in the restriction requirement to support the traverse, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The applicant is advised, in the next communication, to cancel the non-elected claims, the restriction is final.

Specification

The disclosure is objected to because page 8 of the specification contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-12, 27-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 27 and their dependencies are rejected because "unidirectional flow" in claim 1 and 27 is unclear and incomplete as to unidirectional flow of what.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form The basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-4, 28 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior art of record Plaza (USP 6377992)

(Claims 1 and similarly recited claims 27)

Selecting a link represented by at least a portion of the design (fig 8-9, 15); determining a directionality for the link selected (fig 8-9, 15); and

In response to determining the link to be bidirectional (bidirectional link in fig 8-9, 15), emulating the link in the design using first and second unidirectional links (col 8 line 50, fig 8-9, 15).

(Claims 2-4) in which the emulating represents the second unidirectional link in opposite data-routing orientation relative to the first unidirectional link (fig 8-9, 15); simulating signal excitation on at least a portion of the design, the portion to model a circuit; and determining results from the simulating signal excitation (col 11 line 51); in which the simulating and determining results are performed using the emulated first and second unidirectional links (col 11 line 50+, fig 8-9).

(Claim 28) simulating (col 11) signal excitation of at least a portion of the system model modified with the two separate unidirectional links (fig 8-9, 15); and recording responses from the simulating

2. Claims 1-4, 28 are rejected under 35 U.S.C. 102(e) as being anticipated by the prior art of record Albrecht (2004/0250244)

(Claims 1 and similarly recited claims 27)

Selecting a link represented by at least a portion of the design (fig 1-2); determining a directionality for the link selected (fig 1-2); and

In response to determining the link to be bidirectional (bidirectional link in fig 1-2), emulating the link in the design using first and second unidirectional links (para 0024, 0032, first and second unidirectional links in fig 1-2).

(Claims 2-4) in which the emulating represents the second unidirectional link in opposite data-routing orientation relative to the first unidirectional link (fig 1-2); simulating signal excitation on at least a portion of the design (fig 1, 3), the portion to model a circuit; and determining results from the simulating signal excitation (fig 1, 3); in which the simulating and determining results are performed using the emulated first and second unidirectional links (fig 1, 3, para 0024, 0032).

(Claim 28) simulating signal excitation of at least a portion of the system model modified with the two separate unidirectional links (fig 1, 3); and recording responses from the simulating (fig 1, 3)

3. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by the prior art of record Chen (US pub. 2003/0214965)

(Claims 1 and similarly recited claims 27)

Selecting a link represented by at least a portion of the design (abstract, para 0006, fig 2, 4-6); determining a directionality for the link selected (abstract, para 0006, fig 2, 4-6); and

In response to determining the link to be bidirectional (title, abstract, para 0006, fig 2, 4-6), emulating the link in the design using first and second unidirectional links (para 0019).

4. Claims 1-9, 27-30 are rejected under 35 U.S.C. 102(e) as being anticipated by the prior art of record Selvidge (USP 6961691)

(Claims 1 and similarly recited claims 27)

Selecting a link represented by at least a portion of the design (fig 7); determining a directionality for the link selected (fig 7); and

In response to determining the link (by 701 and 702) to be bidirectional (bidirectional 730), emulating (100 in fig 1, 600 in fig 7 and 701 in fig 7) the link in the design using first and second unidirectional links (first and second unidirectional links in fig 7).

(Claims 2-4) in which the emulating represents the second unidirectional link in opposite data-routing orientation relative to the first unidirectional link (I/O, transmitter/receiver/xmitter in fig 7); simulating signal excitation on at least a portion of the design (100 in fig 1, 600 in fig 7 and 701 in fig 7), the portion to model a circuit; and determining results from the simulating signal excitation (fig 1, 6-7; in which the simulating and determining results are performed using the emulated first and second unidirectional links (fig 6-7).

(Claims 5-6) responsive to determining a tap interconnect represented by another portion of the design to be coupled to the bidirectional link, emulating the tap interconnect in the design of the circuit system model using at least one unidirectional input line and a unidirectional output line (I/O, transmitter/receiver/xmitter in fig 7); further comprising emulating (by 100 in fig 1, 600 in fig 7 and 701 in fig 7) the unidirectional output line in parallel relationship to the at least one unidirectional input line (fig 7) .

(Claims 7-8) further comprising: simulating signal excitation of at least a portion of the design with the emulated first and second unidirectional links and the emulated tap interconnect (fig 7); and responsive to the simulating signal excitation, emulating a tri-state buffer (in fig 7) in series with the unidirectional input line (I/O, transmitter/receiver/xmitter in fig 7); simulating operation of the design with the emulated first and second unidirectional links and emulated tap interconnect (fig 7), the simulating to comprise: emulating a tri-state buffer (in fig 7) in series with the unidirectional input line (I/O, transmitter/receiver/xmitter in fig 7).

(Claim 9) the simulating to further comprise: determining an absence of an input signal (I/O, transmitter/receiver/xmitter in fig 7) on each of the first and second unidirectional links; and conditioning an enablement of the emulated tri-state buffer (tri-state buffer in fig 5 has

conditioning enable/select signal input) on determining the absence of an input signal (from I/O, transmitter/receiver/xmitter in fig 7) on each of the first and the second unidirectional links.

(Claims 28-29) simulating signal excitation of at least a portion of the system model modified with the two separate unidirectional links (I/O, transmitter/receiver/xmitter in fig 7); and recording responses from the simulating (fig 1, 6-7); realizing at least a portion of the system model, the realizing to comprise: representing first and second, oppositely directed data-routing, unidirectional lines (I/O, transmitter/receiver/xmitter in fig 7) for a tap to interconnect the bidirectional link, representing a tri-state buffer (in fig 7) in series with the first one of the unidirectional lines for the tap, and representing the tri-state buffer to drive the second one of the unidirectional lines for the tap and the two separate unidirectional links (I/O, transmitter/receiver/xmitter in fig 7).

(Claim 30) determining a first signal (I/O, transmitter/receiver/xmitter in fig 7) represented at the first unidirectional line for the tap; and responsive to the determining of the first signal at the first unidirectional line for the tap (in fig 7), representing a second signal on the second unidirectional line for the tap (in fig 7) and the two separate unidirectional links (I/O, transmitter/receiver/xmitter in fig 7).

Allowable Subject Matter

Claims 10-12 and 31would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 10-12 and 31would be allowable because the prior art of record does not teach or suggest the limitations in claims 10 and 31.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Dinh whose telephone number is 571-272-1890. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Jack Chiang can be reached on 571-272-7483. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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